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Quantitative imaging characterizes techniques in which measurable parameters are extracted from voxels for describing physical, chemical, or biological properties of tissue. Radiology today is increasingly confronted with the demand of obtaining functional imaging information beyond morphology. This quantitative information should result in an improved characterization and stratification of disease and should help in the prediction or assessment of response to treatment, with the ultimate goal of optimizing clinical decision making and patient outcome.

The most prevalent current topic for quantitative imaging is oncology,[1–7] where new targeted anticancer therapies result in response patterns that often cannot be determined by conventional morphologic imaging alone. In this scenario, functional imaging adds to the understanding of the prediction and assessment of therapy response. However, oncology is not the sole field for the application of quantitative imaging. Quantitative imaging today proves its usefulness and added value also in musculoskeletal[8,9] and lung[10] imaging.

This special issue of *Investigative Radiology* is dedicated to the most recent research in the field of quantitative imaging focusing on magnetic resonance imaging,[2,3,5–8,11–13] computed tomography,[1,9,10,14] and ultrasound,[4] including a broad range of applications. More recently introduced techniques for data evaluation such as texture analysis[7,10] are covered, and in a similar manner, although pre-clinical in nature, photon counting computed tomography technology.[15]

This intriguing topic of the special issue was reflected by a very large number of submissions, necessitating a highly competitive review process. We thank all authors for their submissions and especially all reviewers for their outstanding reviews. As a result, the readers will find a total of 15 high-quality articles on quantitative imaging with various modalities, measures, and applications.

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